



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/712,904

11/13/2003

David J. Baker

25090A

9434

22889 7590 02/26/2007
OWENS CORNING
2790 COLUMBUS ROAD
GRANVILLE, OH 43023

EXAMINER

HALPERN, MARK

ART UNIT

PAPER NUMBER

1731

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|-----------|---------------|
|--|-----------|---------------|

3 MONTHS

02/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/712,904

Applicant(s)

BAKER ET AL.

Examiner

Mark Halpern

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18,27-32 and 34-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18,27-32 and 34-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/8/07.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

1) Acknowledgement is made of Amendment received 12/13/2006.

Claims 1, 12, 15, 27, 29, 31, 37 are amended, and claim 33 is cancelled.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2) Claims 1, 3-6, 8, 12-13, 15-17, 27-32, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Van Dornick (3,525,604).

Claims 1, 3-6, 8, 12-13, 15-17, 27-32: Van Dornick discloses a melting furnace for refining palletized metalliferous materials. The furnace is an elongated channel and includes an upstream end, a downstream end, two side walls a floor and a roof.

Art Unit: 1731

The exhaust stack is located at the downstream end, is located downstream of all the burners, and is in communication with the downstream end of the furnace. As shown in Figure 1, the location of the stack at the discharge wall, therefore it is 100 % away from the charge entry. The charge entry of melting materials and the burners are located at the upstream end (col. 3, line 62 to col. 7, line 12, Figures 1, 2). The charge entry apparatus reads on a charger, which is supplying glass forming material, slag (see Figures 1, 2). The furnace of Van Dornick is capable of melting glass, or in the least, it would have been obvious to one skilled in the art at the time the invention was made, that the furnace of Van Dornick be capable of melting glass, because there no specified structural differences between the instant furnace and the furnace of Van Dornick, and further the melting furnace of Van Dornick operates at temperatures of 3000 to 3600 °F (1648 to 1982 °C) as does a furnace for melting glass.

3) Claims 2, 7, 10-11, 18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Dornick in view of Pflugl (5,925,165).

Claim 2: Van Dornick is applied as above for claim 1, Van Dornick fails to disclose burner mounted in the roof of the furnace. Pflugl discloses glass melting furnace having multiple burners 9, 10, located and mounted in the roof of the furnace (col. 3, line 18 to col. 4, line 46 and Figures 1, 2). It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Van Dornick and Pflugl, because such a combination would provide for a more even heating of the melted material in the furnace of Van Dornick.

Claims 7, 10-11, 18: Pflugl glass melting furnace has exhaust ducts 25, 38 located downstream of all of burners (col. 3, line 18 to col. 4, line 46 and Figures 1, 2).

4) Claims 9, 14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Dornick in view of Hoke (6,519,973). Van Dornick is applied as above for claims 1, 12, Van Dornick does not disclose that the exhaust is located at a sidewall of the furnace. Hoke discloses a glass melting furnace where exhausts 145, 147, are located at sidewalls of the furnace as shown in Figure 7. It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Van Dornick and Hoke, because such a combination would improve glass quality in the design of Van Dornick as disclosed by Hoke (Abstract).

Art Unit: 1731

5) Claims 34-37, are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Dornick in view of Simpson (US 2001/0039813) or LeBlanc (6,237,369). Van Dornick is applied as above for claim 1, Van Dornick does not disclose further a burner supplying heat to downstream firing end. Simpson and/or LeBlanc disclose a glass melting furnace, where a burner is installed in the roof of the furnace supplying heat toward downstream end of the furnace. The burner is mounted at an angle about 20 degrees to the vertical. See Figures 2A, 3, 5, 7 of Simpson. See Figures 1-3, of LeBlanc. It would have been obvious to combine the teachings of Van Dornick and Simpson and/or LeBlanc, because such a combination would permit melting control in the furnace of Van Dornick.

Response to Amendment

6) Claim 37 objection is withdrawn in view of amended claim.

7) Applicants' arguments filed 12/13/2006, have been fully considered but they are not persuasive.

Applicants allege that the cited prior art, Van Dornick, does not disclose the furnace being an elongated channel.

The Van Dornick furnace reads on an elongated channel. The present Specification does not specifically define what is an elongated channel.

Applicants allege that Van Dornick, does not disclose a glass-melting furnace, that Van Dornick discloses a melting furnace for refining palletized metalliferous materials.

The furnace of Van Dornick is capable of melting glass. There is no structural uniqueness of the instant furnace that would not permit the furnace of Van Dornick to melt glass. Further the melting furnace of Van Dornick operates at temperatures of 3000 to 3600 °F (1648 to 1982 °C) as does a furnace for melting glass.

Applicants allege that the Van Dornick furnace discloses internal and overflow dam, slag removal at different locations and operational differences of prior art furnace.

The present claims are open claims by the use of the term "comprising", therefore the Van Dornick furnace may include internal furnace additions.

Applicants allege that Van Dornick does not address the operational problems associated with glass melting.

The present invention must structurally and not operationally differentiate over the prior art.

Applicants allege that Van Dornick, does not disclose a furnace having an exhaust so that exhaust gases are only exhausted from the exhaust.

Van Dornick shows flue 13 in the downstream end. See Figure 1.

Dependent claims disposition follows the disposition of the independent claims.

Conclusion

8) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone number is 571-272-1190. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.



Mark Halpern
Primary Examiner
Art Unit 1731